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| 10/089,364 | 07/09/2002 | Alan Edward Richardson | 37-02 | 7785 |

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EXAMINER

BAUM, STUART F

ART UNIT PAPER NUMBER

1638

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/089,364

Applicant(s)

RICHARDSON ET AL.

Examiner

Stuart F. Baum

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 and 37-51 is/are pending in the application.
- 4a) Of the above claim(s) 5, 11-25, 40 and 44-49 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9, 10, 28 and 29 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-8, 26-27, 30-33, 37-39, 41-43 and 50-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed 6/16/2005 has been entered.

Claims 1-33 and 37-51 are pending.

Claims 5, 11-25, 40, and 44-49 are withdrawn from consideration for being drawn to non-elected inventions.
2. Claims 1-4, 6-10, 26-33, 37-39, 41-43 and 50-51 including SEQ ID NO:3 encoding SEQ ID NO:4 and SEQ ID NO:11 encoding SEQ ID NO:12 are examined in the present office action.
3. Rejections and objections not set forth below are withdrawn.
4. The text of those sections of Title 35, U.S. Code not included in this office action can be found in a prior office action.

New Matter

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-4, 6-8, 26-27, 30-33, 37-39, 41-43, and 50-51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims have been amended to recite “having at least 95% identity to SEQ ID NO:4”. Applicants fail to point to support for the phrase in the instant specification. Applicants point to page 9, lines 27-29 and page 44, lines 17-18 which recites “95% identity to the sequence set forth in SEQ ID NO:2”. Applicants are required to point to support for “having at least 95% identity to SEQ ID NO:4” or to amend the claims to delete the NEW MATTER.

Scope of Enablement

6. Claims 32-33 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a plant transformed with a nucleic acid sequence encoding a polypeptide having at least 95% identity to SEQ ID NO:4, or a nucleic acid sequence of SEQ ID NO:3 encoding SEQ ID NO:4 and wherein said nucleic acid sequence is operably linked to a nucleic acid encoding a signal peptide directing the secretion of said protein into the apoplast, or a plant transformed with SEQ ID NO:11 encoding SEQ ID NO:12, and method of enhancing the phosphorus nutrition in a plant and increasing the biomass of said plant; does not reasonably provide enablement for a transgenic plant or methods comprising any of the nucleic acid molecules recited above wherein the transgenic plant or method is for enhanced rate of epicotyl and hypocotyl production. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. This rejection is maintained for the reasons of record set forth on pages 6-9 of the Official action mailed 12/16/2004 for claims 1-4, 26-27, 30-33, 37-39 and 50-51. Applicant’s arguments filed 6/16/2005 have been fully considered but they are not persuasive.

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Applicants contend that with entry of this amendment, the issues raised in the office action are no longer applicable (page 15, 2nd full paragraph).

The Office contends that applicants have not provided guidance for one skilled in the art to produce a plant with enhanced rate of epicotyl or hypocotyl production relative to an isogenic plant that does not ectopically express the phytase polypeptide. Applicants have not provided guidance by way of disclosure or example that plants expressing their invention have an increased rate of epicotyl or hypocotyl production. In fact, it is not clear to the office how increasing the phosphorus nutrition of a plant can alter the rate of cell division or the rate of cell elongation so as to produce an epicotyl or hypocotyl at an enhanced rate, compared to a control plant. Absent evidence to the contrary, the prior art does not disclose an increased rate of epicotyl or hypocotyl production in plants exhibiting an increased phosphorus nutrition.

7. Claims 1-4, 6-10, 26-33, 37-39, 41-43 and 50-51 are deemed free of the prior art, given the failure of the prior art to teach or reasonably suggest a transformed plant or method of enhancing the phosphorus nutrition of a plant comprising transforming a plant with a nucleic acid molecule encoding a polypeptide comprising an amino acid sequence having 95% identity to SEQ ID NO:4, or comprising SEQ ID NO:3 encoding SEQ ID NO:4 or SEQ ID NO:11 encoding SEQ ID NO:12; or SEQ ID NO:3 operably linked to a nucleic acid molecule encoding a lupin acid phosphatase signal peptide or a carrot extensin signal peptide.

8. Claims 9-10 and 28-29 are allowed.

9. Claims 1-4, 6-8, 26-27, 30-33, 37-39, 41-43 and 50-51 are rejected.

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10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stuart F. Baum whose telephone number is 571-272-0792. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jones can be reached on 571-272-0745. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

Stuart F. Baum Ph.D.
Patent Examiner
Art Unit 1638
August 31, 2005

DAVID T. FOX
PRIMARY EXAMINER
GROUP 180 / 1638

